

II. Site Description

A. Site Overview

Cleanup is taking place at this Site through a time-critical removal action. The removal start date was October 1, 2014. The removal action involves installing an engineered reinforced bulkhead to stop the flow of contaminated water coming out of the mine adit. The Animas River and many of its tributaries, including Cement Creek, carry high concentrations of hazardous substances (heavy metals) from both acid rock/mine drainage at mine sites and from natural sources not impacted by mining. A U.S Geological Survey (USGS) evaluation of water quality data indicates that during low-flow conditions, mine adit discharges to Cement Creek contribute a large percentage of the metals loading to the Animas River, as measured at the A72 sampling location below Silverton. In October 2012, the sampling results and related modeling showed that the Red and Bonita Mine discharge accounted for an estimated 18 percent of the zinc load at A72, a location on the Animas River below Silverton.

B.

Site Location

The Red and Bonita Mine Site is located within the Cement Creek watershed, a component of the Upper Animas River watershed in unincorporated San Juan County, Colorado. The portal is located approximately seven miles north of the Town of Silverton, Colorado, at 10,893 feet 1 above mean sea level, at 37 degrees 53'49.95"N and 107 degrees 38'38.70"W. Road access is via County Road 110 from Silverton to County Road 53 at the abandoned town of Gladstone.

C.

Site Description

The Red and Bonita Mine Site consists of approximately 1.25 acres of waste rock and suspected tailings material and includes an estimated 3,500 feet of underground workings. The adit, which currently drains approximately 300 gallons per minute (gpm) throughout the year with some fluctuations seasonally, discharges to Cement Creek after crossing through a wetland. Prior to the removal assessment work, the mine water discharged through rock debris, which was the result of a tunnel collapse that occurred decades ago. The

Red and Bonita is one of several mines in the Cement Creek basin that also have draining adits. The relative contribution from all the individual mines in the watershed varies seasonally, depending on flow conditions.-The Site lies east of

Cement Creek on a west-facing mountainside slope with an average grade of 44 percent. The mine is accessible during non-snow months of the year, typically late June through early October. The mining claims associated with the mine are on steep terrain, at approximately 10,800 feet of elevation, limiting conditions for operation.

D. Site History

The watersheds within the volcanic terrain of the San Juan Mountains were the focus of both large-and small-scale mining operations that were active between 1871 and 1991. Historic mapping of the Red and Bonita Mine indicates that mining operations began prior to 1899 and lasted for only a short period of time. No activity occurred after initial operations ceased. The Red and Bonita Mine, Gold King (Level 7) Mine and Mogul Mine all experienced significant increases in flow following the construction of concrete bulkheads in-tlie Sunnyside Mine

American Tunnel between 1996 and 2002. Flow from the American Tunnel was reportedly approximately 1,700 gpm when it was treated prior to the final bulkhead installation. The Red and Bonita Mine was essentially dry with an estimated five gpm flow during the period when the Sunnyside Gold Mine operated and prior to installation of the bulkheads. It now has an approximate flow of 300 gpm. Following the installation of the bulkheads, water treatment of the discharge from the American Tunnel and Cement Creek was discontinued. Water quality in the Animas River has degraded since that time.